

Abstract

Method and system are disclosed for information processing, for example, for multimedia segmentation, indexing and retrieval. The method and system includes multimedia, for example audio/visual/text (A/V/T), integration using a probabilistic framework. Both, multimedia content and context information are represented and processed via the probabilistic framework. This framework is represented, for example, by a Bayesian network and hierarchical priors, which is graphically described by stages, each having a set of layers with each layer including a number of nodes representing content or context information. At least the first layer of the first stage is processes multimedia content information such as objects in the A/V/T domains, or combinations of thereof. The other layers of the various stages describe multimedia context information, as further described below. Each layer is a Bayesian network, wherein nodes of each layer explain certain characteristics of the next "lower" layer and/or "lower" stages. Together, the nodes and connections there between form an augmented Bayesian network. Multimedia context is the circumstance, situation, underlying structure of the multimedia information (audio, visual, text) being processed. The multimedia information (both content and context) is combined at different levels of granularity and level of abstraction within the layers and stages.